



Total Maximum Daily Load (TMDL) Program Clean Water Act (CWA) Section 303(d) Federal Requirement

TMDL STRATEGY (GUIDELINES FOR TMDL DEVELOPMENT)

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I. INTRODUCTION

Section 303(d) of the Clean Water Act requires the development of Total Maximum Daily Loads (TMDLs) for waters that a state has identified as being impaired. These TMDLs must be established at levels necessary to attain and maintain the

applicable water quality standards. In order to implement these requirements, IDEM will characterize the extent and magnitude of the impairment, develop TMDLs that will ensure the attainment of water quality standards and implement the TMDLs. Throughout this process, IDEM will encourage public participation in all TMDL activities.

II. VISION

Improve and maintain high water quality for all Indiana surface waters.

III. MISSION

Develop and implement TMDLs to attain and maintain Indiana's water quality standards.

IV. GOAL

Plan, collect data for, develop and implement TMDLs to achieve water quality standards for waterbodies that are on Indiana's 303(d) list of impaired waters.

V. TMDL ADVISORY GROUPS

A. TMDL COORDINATING GROUP (Internal)

1. ORGANIZATION

An internal TMDL Coordinating Group has been formed to coordinate the activities related to the development of TMDLs. The TMDL Coordinating Group schedules and holds monthly coordinating meetings. The TMDL Program Manager presides over the monthly meetings and together with the Assessment Branch Chief and the Planning and Restoration Branch Chief determine the Coordinating Group's composition, meeting agendas, and assignments. Meeting summaries are prepared to reflect the Group's actions and activities. To assist in the attainment of the goal, it may be necessary to call upon IDEM staff from a variety of areas including, but not limited to, Water Quality Standards Section, Watershed Management Section, Operator Assistance and Training Section; Permitting Sections; Modeling Section, Data Management Section, Compliance Branch, Drinking Water Branch, Office of Land Quality, Office of Enforcement and Office of Legal Counsel. Teams and subgroups of the TMDL Coordinating Group may be formed to carry out essential responsibilities as required.

2. RESPONSIBILITIES

To ensure that the TMDL Coordinating Group's activities are communicated within the Office of Water Quality, the Program Manager will provide copies of agenda, meeting summaries, and other pertinent information on the TMDL Coordinating Group to all Office of Water Quality Branch Chiefs and the Assistant Commissioner. Members of the TMDL Coordinating Group shall also keep other relevant IDEM staff informed of the Group's plans and activities related to TMDLs.

B. TMDL ADVISORY GROUP (External)

An external TMDL Advisory Group consisting of a "Work Group of Stakeholders" is established in October 2000 by Senate Enrolled Act (SEA) 431 to advise IDEM and the Water Pollution Control Board (WPCB) on matters involving TMDLs development. This Group is made of major stakeholders, including but not limited to municipalities, industries, soil and water conservation districts, utilities, county health departments, business, agricultural and environmental interests, other state and federal agencies, and the general public. This Work Group meets regularly, either monthly or quarterly, and makes recommendations to IDEM on identification of issues, the development of policy options, policy adoptions and rulemakings regarding the requirements of the TMDL program.

VI. TMDL PROGRAM STAFF RESOURCES

A. IDEM Staff

The TMDL Program is part of the Environmental Toxicology and Chemistry Section (ETC Section) in the Assessment Branch. The TMDL program initiated at IDEM in 1998 with one Program Manager and one Environmental Scientist. Current TMDL staff resources include: one Program Manager, one Environmental Engineer, three Environmental Managers, and three Environmental Scientists. TMDL staff acts as Project Managers for individual TMDL projects. Additionally, one or more chemists from the ETC Section provide technical support and serve as QA/QC officers and perform Quality Assurance (QA) and Quality Control (QC) of analytical data, and other TMDL activities, as needed.

In addition, early on IDEM had identified the need for 6 Basin Coordinators for Indiana's 6 major river basins to carry out the public process necessary for successful TMDLs. IDEM had prioritized moving forward with a Basin Coordinator approach as evidenced by the Water Quality Focus in the Indiana/IDEM Environmental Performance Partnership Agreement (EnPPA)

signed by EPA on November 30, 2001. However, this approach is dependent upon available resources. Currently, the state is undergoing shortfalls in revenue and the ability to move forward with the Basin Coordinators is hampered, at this time.

B. OUTREACH AND OUTSIDE SUPPORT

In lieu of the Basin Coordinators, IDEM now expects to use the Natural Resource Conservation Service (NRCS) Regional Watershed Coordinators (RWC) to assist with some of the tasks identified for the Basin Coordinators. To facilitate this, four RWCs NRCS liaison positions, funded by Federal 319 grants, have been created at IDEM. These positions are non-regulatory, focusing on nonpoint source issues of watershed management planning and implementation. Within that framework, where an existing watershed group is already working with an NRCS liaison and a 303(d) listed waterbody, assistance can be obtained in the TMDL work by incorporating some TMDL elements into the watershed plan. In the 303(d) listed watersheds, where no watershed groups exist, the NRCS liaisons can assist with the preliminary planning for TMDL work. IDEM 319 Project Managers from the nonpoint source Watershed Management Section can also lend assistance on the preliminary planning in areas where there is already a 319 watershed restoration project. IDEM will also pursue partnerships with other groups and government agencies/municipalities, such as the Indiana Association of Soil and Water Conservation Districts, DNR, NRCS, local government officials, county health departments, and environmental organizations to assist in outreach and education activities in all phases of TMDL work.

VII. TMDL PROGRAM CONTRACTUAL RESOURCES

IDEM will rely initially on the services of one or more Contractors to develop TMDLs and the Implementation Plans for the 303 (d) listed waterbodies. Funding for contract support will come from state funds, and federal 319, 104 (b)(3), and 205 (j) grants. These contracts will generate several TMDLs in a short time. The data used for these contract TMDLs will come mostly from water quality data collected by IDEM staff, and/or from outside sources that would conform to the IDEM's Quality Assurance (QA) and Quality Control (QC) requirements. As part of the contract, the Contractors would also provide training to the TMDL Staff for developing similar TMDLs in the future.

VIII. TMDL DEVELOPMENT SCHEDULE

TMDLs will be developed according to the schedule as described in the 2002 303(d) list of impaired waterbodies. Waterbodies are prioritized for TMDL development taking into account the severity of the pollution and the uses to be made of such waters. The priority ranking specifically includes identification of

waters targeted for TMDL development in the next 2 years after the new 303(d) list is developed, and a long term schedule over 15 years in increments of 5 years each which will correspond with the IDEM water quality major river basin rotation monitoring schedule.

VIX. INTERACTION WITH EPA

The TMDL Program Manager will keep the U.S. EPA Region 5 apprised of TMDL status and progress at IDEM. IDEM will provide copies of draft TMDLs to Region 5 staff at the beginning of the public comment period for review. If the TMDL is especially complicated, IDEM may chose to submit information to EPA for technical assistance during the development process.

X. TMDL PROCESS

A. INTRODUCTION

The waters of the state have been grouped geographically into six major river basins (see IDEM's Surface Water Quality Monitoring Strategy 2001-2005). Water quality data and other information is collected and analyzed from each basin once every five years. The TMDL schedule, to take advantage of all available resources at IDEM, is expected to follow the yearly surface water basin-rotation water quality monitoring schedule.

Initially, as part of the TMDL Strategy in a watershed, the TMDL Program Manager will develop an activity reference guide for each TMDL. This activity reference guide will provide: (1) a list of the necessary activities and tasks, (2) a schedule for completing activities and tasks associated with an individual TMDL, and (3) a roster that indicates which section, staff, and /or contractor are responsible for completion of each activity/task.

B. PRELIMINARY WORK

1. Target Identification

One or more quantifiable endpoints for the TMDL will be selected. This may be a numeric water quality criterion or a target value that will ensure a narrative water quality criterion is met. If the pollutant/stressor causing the water quality impairment is not known, the Sampling and Analysis Workplan for a TMDL will include a data collection plan to identify potential cause(s) for the impairment.

2. Source Identification

A preliminary identification of potential point and nonpoint source contributing to the water quality impairment will be made to assist in targeting locations necessary to collect data for the TMDL development.

3. Data Collection

Existing local, state and federal data or information will be used to preliminarily identify potential sources and assist with targeting the TMDL data collection effort. The TMDL Program Manager will also use the available Watershed Restoration Action Strategies in the data collection planning process. These can be accessed on IDEM's website cited below:
www.IN.gov/idem/water/planbr/wsm/wras.html.

4. Stakeholders List Development

To accomplish the data and information gathering task for a TMDL, the TMDL Program Manager will develop a contact list of key stakeholders within the targeted watershed. At a minimum, this list will be comprised of the NPDES permit holders, soil and water conservation districts, mayors, town boards, county surveyors and drainage boards, county health departments, chambers of commerce, water utilities, county farm bureau organizations, county planning commissions, solid waste districts, and citizen environmental groups. The list will contain a name, address, e-mail address (if available) and phone number of a contact within each group. State and federal agency contacts will be identified for all agencies who have jurisdiction over land or water in the watershed, who are carrying out a pollution abatement or conservation project in the watershed, or who have an environmental enforcement capacity in the watershed.

In general, the TMDL process, development of a TMDL and an Implementation Plan, will be accomplished in three separate phases:

Phase I: Planning and Data Collection (data QA/QC, data qualification, data assessment for TMDL development or de-listing)

Phase II: TMDL Development (watershed characterization, modeling, and TMDL reports)

Phase III: TMDL Implementation

C. TMDL- PHASE I

1. Planning

a. Sampling and Analysis Workplans

Planning for data collection activities for a TMDL will be carried out in the spring of the first year. Comprehensive Sampling and Analysis Workplans will be developed that address TMDL sampling needs such as identification of causes for impairment, identification and characterization of point and nonpoint sources, and data requirements for TMDL development.

Sampling sites will be selected at the River main stem, and/or its tributaries as necessary. Selection of sampling sites will take into consideration possible point or non-point source contributions. All sampling sites or locations will be identified on a site map.

b. Pre-Survey

A pre-survey of each waterbody chosen for TMDL development will be done in late spring or early summer to identify all sampling locations. Attention will be given to sampling site accessibility such as bridge access and the need for landowner permission, if applicable.

2. Samples and Data Collection

a. Collection of Samples and Field Measurements

Water chemistry, fish tissue, fish and macroinvertebrates, bacteriological, and/or sediment samples will be collected, as needed, for a TMDL. Data on hydrologic measurements will be collected from each selected impaired waterbody according to the Sampling and Analysis Workplan. Sampling for a TMDL will start possibly in, mid spring and may continue through late fall.

b. Testing/Analysis

Matrix specific sample analyses will be conducted at an IDEM approved contract laboratory or, at the ISDH laboratory. E. coli samples will be analyzed at the IDEM TMDL laboratory, or at the IDEM TMDL or Survey's Section Mobile E. coli laboratory. All chemical and bacteriological analyses will be in conformance with the requirements of the IDEM Broad Agency Announcement (BAA), and/or the Quality Assurance Project Plan (QAPP) for all the "Indiana Surface Water Quality Monitoring Programs".

c. Database Development and QA/QC of Data

After the data are received from the analytical laboratory or from external sources, database development work is initiated. All data, irrespective of the data source, will undergo a QA/QC review process to assure compliance with the stipulated data quality objective (DQO) and data quality assessment (DQA) as described in the Sampling and Analysis Workplan, and/or in the IDEM's QAPP for surface water quality monitoring programs. The DQO would be based on the U.S. EPA recommended seven step systematic planning process to clarify study objectives, define the appropriate types of data that would be collected, and establish decision criteria for final use of the data. All the field and analytical data collected for the TMDLs will be evaluated for quality assurance and to meet compliance with one of 4 DQA Levels discussed in the IDEM's QAPP.

3. Data Compilation and Evaluation

Results from water quality assessments and findings from field data are entered into the AIMS database. This data is then compiled and preferably a water quality assessment report is prepared. If the new data shows no impairment, the waterbody and/or the pollutant is recommended to be de-listed from the 303(d) list. However, if the waterbody continues to be impaired, a TMDL is recommended for the specific waterbody on the parameter causing the impairment.

4. Public/Stakeholders Meeting

A public/stakeholders TMDL kickoff meeting is scheduled either at the start or end of TMDL-Phase I. TMDL contractors, when applicable, stakeholders and general public are expected and invited to attend this meeting. The TMDL Program Manager and the TMDL Project Manager assigned for the TMDL project will be responsible for determining the agenda and content of the public meetings. At a minimum, the meetings will cover a discussion of the 303(d) listed waters in the watershed, sampling plans for data collection, an overview of the TMDL program at IDEM, public and stakeholders input and participation, and goals and objectives of the TMDL project.

Estimated Time Period: TMDL- Phase I is estimated to run from year One through year two.

D. TMDL- PHASE II

1. TMDL Development

a. Planning

The TMDL Program Manager and the TMDL Project Manager responsible for the TMDL project will meet with the key stakeholder groups to gather data and information about area resources and perceived problems that may relate to the 303(d) listed waters in the targeted watershed.

b. Data and Information Gathering:

Results from water quality assessments and findings from field data from TMDL-Phase I will be compiled and made available to the modeling staff and/or the Contractor. Area information will be used in preparing a watershed characterization report, while the water quality results and field data will be used for development of a possible TMDL scenario and a final TMDL report.

c. Modeling

At the start of TMDL- Phase II, possible water quality models needed to develop the TMDL will be identified. These could include sophisticated models that simulate instream water quality under a variety of conditions or simple mass balance models. The numeric target and type of model required to develop the TMDL will be finalized.

All the water quality assessment data will be reviewed to determine if it is sufficient and acceptable for a TMDL. Applicable rules and procedures will be identified that relate to calculating TMDLs. The inputs to the model will be finalized. If necessary, the water quality model will be calibrated and verified either using the most current water quality assessment data, collected in the past 5 years, for a particular pollutant (e.g. a model for dissolved oxygen).

d. Additional Sampling and Data Collection

Under certain circumstances, there may be a need to perform additional sampling. This usually occurs at the time initial modeling is underway and the modeler may conclude that not enough specific data exist to adequately model point or nonpoint sources. When this occurs, a request for more data is made to the IDEM sampling team and the team will be expected to gather the additional site-specific data needed for the modeling effort. If IDEM is not able to collect the additional data a

Contractor may be used to collect the data. If a Contractor is used they will follow all IDEM approved sampling, analysis and data gathering procedures.

e. TMDL Scenario Development

Initial TMDL scenarios will be developed for point and nonpoint sources. All TMDL scenarios will ensure the attainment of water quality standards, include a margin of safety and may include an allocation for future growth. Existing and proposed controls on point and nonpoint sources will be considered in developing the TMDL scenarios. The TMDL scenarios will be shared with appropriate IDEM staff and the stakeholders. The IDEM staff, and the stakeholders will work with these scenarios and may develop other valid scenarios during this deliberation process. A TMDL scenario, developed with the input and participation of IDEM and stakeholders, shall be selected to develop a TMDL implementation plan.

2. Watershed Outreach and Management

a. Inventory Resources and Problems

During the first part of TMDL-Phase II, the TMDL Program Manager will meet with watershed groups and stakeholders groups in the targeted watershed. These meetings will serve to reinforce information delivered during public meetings, answer questions, and encourage the idea of a working partnership between watershed groups and stakeholders and the state.

b. Coordinate Local Knowledge with TMDL Scenario Development

As TMDL scenarios are developed in the targeted watershed, TMDL Program Manager will work with the watershed groups and stakeholders and the modelers to develop practical loading scenarios. This will require free exchange of information between watershed groups and stakeholders and the modelers in a working partnership.

c. Share Intermediate Information with Watershed Groups

As part of the working partnership with the watershed groups and stakeholders, the TMDL Program Manager will provide regular updates about the TMDL development progress. These progress reports will be done on a quarterly basis and be delivered via email or U.S. mail.

d. Develop Processes that will lead to a Management Plan

The TMDL Program Manager will foster partnerships between watershed groups and stakeholders and other agencies as needed in order to address TMDL scenario development and its implementation. This will involve a need for information exchange about the probable causes of 303(d) listing, TMDL development and the processes to mitigate the water quality impairment.

e. Develop Consensus on Final TMDL Scenario with Watershed Groups and Stakeholders

During TMDL-Phase I and ending in Phase II of TMDL, the TMDL Program Manager, and other IDEM staff will work with watershed groups and stakeholders to reach a consensus on a final TMDL scenario that is most practical and has the highest potential for success within the targeted watershed. If consensus on a TMDL scenario cannot be reached, IDEM has the responsibility to select the final TMDL scenario and its implementation.

f. Submission to EPA of Final TMDL

At the end of Phase II, or when the TMDL is completed, the TMDL will be submitted to EPA for review and approval. EPA has 30 days to approve a TMDL. The EPA will review the TMDL implementation plan, but under the new 2000 Watershed (TMDL) Rule EPA will not approve the TMDL Implementation Plan. IDEM will have two years to develop the implementation plan after approval of the Final TMDL.

g. Public/Stakeholders Meeting

In the TMDL- Phase II one to two public/stakeholder meetings will be held in the TMDL targeted watershed. Watershed characterization, data gathered, TMDL scenarios, and the draft TMDL report will be presented at these meetings.

Estimated Time Period: TMDL-Phase II is estimated to run from year two through year four.

E. TMDL-PHASE III

1. TMDL Implementation Plan

The final TMDL scenario chosen in TMDL-Phase II will be used to develop a plan to implement the TMDL. During this process, stakeholder participation will be essential. The TMDL Program Manager, in conjunction with the stakeholder groups, will develop a plan to implement the TMDL. Once the draft TMDL implementation plan has been finalized through comments from stakeholder groups and IDEM, the plan becomes 'draft-final' and open for further review by the public. Public meetings will be held in the TMDL targeted watersheds. An outreach team comprised of the TMDL Program Manager, the TMDL Project Manager and other key IDEM staff will determine the agenda and content of the public meetings. The TMDL Implementation Plan will include:

- a. Description of activities (control measures and/or best management practices) that will be initiated to implement the TMDL. This should consider at a minimum:
 - (i) Point sources: A list of the NPDES permits and un-permitted discharges and corresponding wasteload allocations, and the schedule for revision or issuance of these permits, if necessary, to incorporate the TMDL allocations.
 - (ii) Nonpoint sources: Load allocations, or equivalent, and a description of best management practices and control measures, including but not limited to the following:
 - (AA) The identification of the parties who must undertake the appropriate actions to implement the TMDL.
 - (BB) The identification of the control measures and best management practices that the identified nonpoint sources must undertake to meet the allocations.
 - (CC) An indication of when control measures must be implemented.
 - (DD) A delineation of the area (the geographic boundaries) where control measures and best management practices would apply (the geographic boundaries for nonpoint sources).
- b. A schedule for implementing specific activities deemed necessary to achieve the TMDL. This should include:

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- (i) A schedule for issuing new NPDES permits and modifying or re-issuing existing NPDES permits.
 - (ii) A schedule for implementing nonpoint source control using best management practices and/or control measures.
 - (iii) A schedule for completion of the milestones using best management practices and control measures.
 - (iv) The estimated time frame for control measures and best management practices effectiveness in meeting water quality standards.
 - (v) A schedule for revising the TMDL in the event that revisions should prove to be necessary.
 - c. The legal authorities under which the control measures will be carried out and whether these actions are enforceable. The plan should also include information on how the specified legal authorities will be used and enforced, and by whom.
 - d. "Reasonable assurances"
 - (i) That nonenforceable actions (for certain nonpoint source activities) will result in the load allocations for nonpoint sources required by a TMDL. This would, at a minimum, include:
 - (AA) Demonstration of the availability of funds to implement the nonenforceable actions;
 - (BB) Description of the process for entering into any necessary agreements (such as with/among various federal, state, and local agencies/entities, private landowners, others) to carry out such nonenforceable actions and the probability of success in achieving such agreements;
 - (CC) An assessment of the likelihood of continuation of governmental programs (e.g., Conservation Reserve Program) that are planned to assist in implementation; and
 - (DD) An analysis of the anticipated effectiveness of the management measures (a demonstration of how, if implemented, they will actually lead to desired reductions; an evaluation of the success of existing/prior programs calling for similar controls in the watershed or a similar watershed may be used in this analysis).

- (ii) That adequate funding for planned point source controls (e.g., planned wastewater treatment plant upgrades) is expected to be available.
- e. An estimate of the time required to attain applicable water quality standards and a demonstration that the standards will be met as expeditiously as practicable. It would be expected that actions called for to implement the TMDL would begin either immediately or at least within 2 years after the approval of the TMDL.
- f. A monitoring plan designed to determine the effectiveness of the implementing actions and whether allocations were met. This plan must include at least the following components:
 - (i) A plan for assessing whether nonpoint source actions are being implemented as planned;
 - (ii) A plan for assessing whether allocations are sufficient to attain water quality standards;
 - (iii) A plan for assessing the improvement in water quality conditions (reflecting time necessary to ensure that water quality standards are met);
 - (iv) A plan for assessing whether the milestones described in component (g) are being met; and
 - (v) A plan for assessing the effectiveness of best management practices and control measures.

In addition, the implementation plan/schedule should indicate who would implement and fund the monitoring activities.

- g. Measurable milestones for determining whether the implementation plan is being properly executed, and for determining whether applicable water quality standards are being attained. These must include:
 - (i) Appropriate incremental, measurable water quality targets to ensure that progress is being made (associated with the periodic monitoring called for in the monitoring plan (component f); and
 - (ii) Milestones for implementing control measures, for example:
 - (AA) The number of permits to be modified by a certain date; and

(BB) A quantifiable measure of the nonpoint source actions implemented by a certain date (which, depending upon the situation, could be an estimate of the number of specific control actions taken, the number of farms adopting management measures, acres of forests adopting certain best management practices, or other measures suitable to demonstrate on-the-ground implementation).

h. Actions required if milestones are not met.

These actions depend on why the milestones are not being achieved and the degree to which the milestones were not met. The actions should explain the TMDL corrective mechanism, including how and when it would be necessary for IDEM to modify each component of the TMDL (load allocations, point or nonpoint source control measures and/or best management practices in the implementation plan, monitoring plan, etc.), and when it may be appropriate to "re-open" or re-submit the TMDL.

Estimated Time Period: TMDL- Phase III is estimated to run from year four through year six.

2. TMDL Incorporation into Continuing Planning Process

The final approved TMDL will be incorporated into the IDEM's Continuing Planning Process at its next revision.

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ATTACHMENT I

Waterbodies Scheduled For TMDLs Development Beginning in 2003 From 2002 303(d) List

	County	Major Basin	Parameter(s) of Concern	TMDL Development Schedule	303(d) Number
Heavilon Ditch – Headwater	Clinton	Upper Wabash	Ammonia; DO	2003 - 2008	*322
Prairie Creek Ditch - Lower	Howard	Upper Wabash	E. coli	2003 - 2008	83
Cannon - Goyer Ditch	Howard	Upper Wabash	E. coli	2003 - 2008	97
Big Monon Ditch – Outlet	White, Pulaski	Upper Wabash	E. coli	2003 - 2008	*284
Lauramie Creek	Tippecanoe	Upper Wabash	E. coli	2003 - 2008	319
Middle Fork Wildcat Creek - Pettit	Tippecanoe	Upper Wabash	E. coli	2003 - 2008	*320
West Honey Creek	Howard	Upper Wabash	E. coli	2003 - 2008	327
Kitty Run And Other Tributaries; Little Wildcat Creek - East Fork	Howard	Upper Wabash	E. coli	2003 - 2008	328
Finn Ditch And Other Tributaries; Martin - Youngman Ditch Basin	Howard	Upper Wabash	E. coli	2003 - 2008	329
Turkey Creek; Mud Creek - Irwin Creek	Tipton	Upper Wabash	E. coli	2003 - 2008	332
Crooked Lake	Noble, Whitley	Upper Wabash	Impaired Biotic Communities	2003 - 2010	@4
Wildcat Creek Mainstem	Carroll, Tippecanoe	Upper Wabash	E. coli	2003 - 2010	97
Wildcat Creek Mainstem	Howard, Tipton, Grant, Madison	Upper Wabash	E. coli	2003 - 2010	97
Limberlost Creek And Tributaries	Jay	Upper Wabash	Impaired Biotic Communities	2003 - 2010	@314
Hummel Creek	Grant	Upper Wabash	Impaired Biotic Communities	2003 - 2010	@318

**The following Waterbodies are Scheduled for TMDLs Development
In 2008-2013, but will be Addressed by Wildcat Creek Watershed TMDL in 2003**

Waterbody Name and 303(d) Number	County	Major Basin	Parameter(s) of Concern	TMDL Development Schedule	303(d) Number
Kokomo Creek – Mainstem	Howard	Upper Wabash	E. coli	2008 - 2013	72
Little Wildcat Creek – Mainstem	Howard	Upper Wabash	E. coli	2008 - 2013	78
Wildcat Creek – Mainstem	Howard, Carroll, Tippecanoe	Upper Wabash	Nitrates, E. coli, DO	2008 - 2013	97
Grassy Fork Ditch – Harper Ditch	Grant	Upper Wabash	E. coli	2013 - 2018	333

A total of 15 Waterbodies on Page 1 are identified for TMDLs development in 2003. Out of these 9 Waterbodies will be dealt with as Wildcat Creek Watershed TMDL.

* TMDLs for 3 Waterbodies, 303(d) List ID #332, 284 and 319, will be developed as individual TMDLs.

@ Three Waterbodies, 303(d) List ID #4, 314 and 318, are identified for Impaired Biotic Communities (IBC), but only one Waterbody (Crooked Lake, 303(d) ID #4) will be attempted for TMDL development in 2003.

ATTACHMENT II

Status of Contract TMDLs From 1998 303(d) List

Waterbody (WB) Name	303(d) List ID #	Major River Basin	Parameter (s)	Contractor	Status *
Grand Calumet River (GCR), E. Branch	8	Lake Michigan	FCA-PCB, Hg, Oil & Grease CN, Pesticides	U.S. ACOE	Draft Due to IDEM 09/00/03
Grand Calumet River. (GCR) W. Branch	9	Lake Michigan	FCA-PCB, Hg, NH ₃ , Chlorides CN, Pesticides	U.S. ACOE	Draft Due to IDEM 09/00/03
Grand Calumet River (GCR) / Lagoons	10	Lake Michigan	FCA-PCB	U.S. ACOE	Draft Due to IDEM 09/00/03
Indiana Harbor Canal (IHC)	11	Lake Michigan	FCA-PCB, Hg Pesticides	U.S. ACOE	Draft Due to IDEM 09/00/03
Indiana Harbor Canal,(IHC)/ Lake George,	12	Lake Michigan	FCA-PCB, Hg Oil & Grease Pesticides	U.S. ACOE	Draft Due to IDEM 09/00/03
Fall Creek	115	WF. White River	<i>E. coli</i>	City of Indianapolis	Draft Due to IDEM 01/15/03
Pleasant Run	137	WF. White River	<i>E. coli</i>	City of Indianapolis	Draft Due to IDEM 01/15/03
WF. White River, Marion County (3-Segments)	148 149 154	WF. White River	<i>E. coli</i> <i>E. coli</i> <i>E. coli</i>	City of Indianapolis	Draft Due to IDEM 02/21/03
WF. White River, Muncie, Marion & Hamilton Counties (3-Segments)	153 157 158	WF. White River	<i>E. coli</i> <i>E. coli</i> <i>E. coli</i>	Tetra Tech, Inc.	Draft Due to IDEM 08/22/03
Little Calumet River (3-Segments)	21 23 24	Lake Michigan	<i>E. coli</i> DO, CN Pesticides	Earth Tech	Draft Due to IDEM 08/21/03
Burns Ditch	2	Lake Michigan	<i>E. coli</i>	Earth Tech	Draft Due to IDEM 08/21/03
Salt Creek	34	Lake Michigan	<i>E. coli</i>	WHP	Draft Due to IDEM 08/21/03
Lake Michigan Indiana Shoreline	17	Lake Michigan	<i>E. coli</i>	Tetra Tech Inc.	Draft Due to IDEM 08/22/03
Trail Creek	37	Lake Michigan	<i>E. coli</i>	Triad Engineering	Draft Due to IDEM 05/31/03

* Draft due date to IDEM is 2 months ahead of Contract end time intended for IDEM and EPA review.